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Equivalent Hardness Conversion Table

VPN	ROCKWELL SCALES															BRINELL		SCLERO-SCOPE	U.T.S.	
DPH HV/10	A	B	C	D	E	F	G	H	K	15N	30N	45N	15T	30T	45T	BHN 500kg	BHN 3000kg		Kpsi	Mpa
1865	92		80	87						97	92	87								
1787	92		79	86						96	92	87								
1710	91		78	85						96	91	86								
1633	91		77	84						96	91	85								
1556	90		76	83						96	90	84								
1478	90		75	83						95	89	83								
1400	89		74	82						95	89	82								
1323	89		73	81						95	88	81								
1245	88		72	80						95	87	80								
1160	87		71	80						94	87	79								
1076	87		70	79						94	86	78						101		
1004	86		69	78						94	85	77						99		
940	86		68	77						93	84	75						97		
900	85		67	76						93	84	74						95		
865	85		66	75						93	83	73						92		
832	84		65	75						92	82	72				739		91		
800	84		64	74						92	81	71				722		88		
772	83		63	73						91	80	70				705		87		
746	83		62	72						91	79	69				688		85		
720	82		61	72						91	79	68				670		83		
697	81		60	71						90	78	67				654		81	320	2206
674	81		59	70						90	77	66				634		80	310	2137
653	80		58	69						89	76	64				615		78	300	2069
633	80		57	69						89	75	63				595		76	290	2000
613	79		56	68						88	74	62				577		75	282	1944
595	79	120	55	67						88	73	61				560		74	274	1889
577	78	120	54	66						87	72	60				543		72	266	1834
560	78	119	53	65						87	71	59				523		71	257	1772
544	77	119	52	65						86	70	57				512		69	245	1689
528	77	118	51	64						86	69	56				496		68	239	1648
513	76	117	50	63						86	69	55				481		67	233	1607
498	75	117	49	62						85	68	54				469		66	227	1565
484	75	116	48	61						85	67	53				455		64	221	1524
471	74	116	47	61						84	66	51				443		63	217	1496
458	74	115	46	60						84	65	50				432		62	212	1462
446	73	115	45	59						83	64	49				421		60	206	1420
434	73	114	44	59						83	63	48				409		58	200	1379
423	72	113	43	58						82	62	47				400		57	196	1351
412	72	113	42	57						82	61	46				390		56	191	1317
402	71	112	41	56						81	60	44				381		55	187	1289
392	71	112	40	55						80	60	43				371		54	182	1255
382	70	111	39	55						80	59	42				362		52	177	1220

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372	70	110	38	54						79	58	41					353	51	173	1193
363	69	110	37	53						79	57	40					344	50	169	1165
354	69	109	36	52						78	56	38					336	49	165	1138
345	68	109	35	52						78	55	37					327	48	160	1103
336	68	108	34	51						77	54	36					319	47	156	1076
327	67	108	33	50						77	53	35					311	46	152	1048
318	67	107	32	49						76	52	34					301	44	147	1014
310	66	106	31	48				91		76	51	33					294	43	144	993
302	66	105	30	48				91		75	50	31					286	42	140	965
294	65	104	29	47				89		75	50	30					279	41	137	945
286	65	104	28	46				88		74	49	29					271	41	133	917
279	64	103	27	45				87		73	48	28					264	40	129	889
272	64	103	26	45				86		73	47	27					258	39	126	869
266	63	102	25	44				85		72	46	26					253	38	124	855
260	63	101	24	43				84		72	45	24					247	37	121	834
254	62	100	23	42				83		71	44	23	93	82	72	201	240	36	118	814
248	62	99	22	42				81		71	43	22	93	82	71	195	234	35	115	793
243	61	98	21	41				79		70	42	21	93	81	70	189	228	35	112	772
238	61	97	20	40				78		69	42	20	92	81	69	184	222	34	109	752
234	60	97	19					77					92	80	69	181	218	34	107	738
230	59	96	18					76					92	80	68	179	214	33	106	731
226	59	96	17					75					92	80	68	177	210	33	104	717
222	58	95	16					74					92	79	67	175	208	32	102	703
217	58	95	15					73					92	79	67	171	205	31	100	690
213	58	94	14					73					91	79	66	169	203	31	99	683
208	57	93	13					71					91	78	66	167	200	30	98	676
204	57	92	12					70	100				91	78	65	163	195	30	96	662
200	56	92	11					69	100				91	77	64	162	193	29	95	655
196	56	91	10					68	100				90	77	64	160	190	28	93	641
192	56	90	9					66	99				90	76	63	157	185	27	91	627
188	55	89	8					64	98				90	76	62	154	180	26	88	607
184	54	88	7					63	97				90	75	61	151	176	26	86	593
180	54	87	6					61	97				89	75	60	148	172	26	84	579
176	53	86	5					59	96				89	74	59	145	169	25	83	572
172	53	85	4					58	95				89	74	58	142	165	25	81	558
168	52	84	3					56	94				88	73	57	140	162	25	79	545
164	51	83	2					54	93				88	72	56	137	159	24	78	538
160	51	82	1					53	92				88	72	55	135	156	24	76	524
156	50	81	0					51	91				87	71	54	133	153	24	75	517
152	50	80						49	91				87	70	53	130	150		73	503
148	49	79						48	90				87	70	52	128	147			
144	49	78						46	89				86	69	51	126	144			
141	48	77						44	88				86	68	50	124	141			
139	47	76						43	87				86	68	49	122	139			
137	47	75					100	41	86				85	67	49	120	137			
135	46	74					99	39	85				85	66	48	118	135			
132	46	73					99	38	85				85	66	47	116	132			
130	45	72					98	36	84				84	65	46	114	130			
127	45	71					100	98	35	83			84	64	45	112	127			
125	44	70					100	97	33	82			84	64	44	110	125			
123	44	69					99	96	31	81			83	63	43	109	123			
120	43	68					98	96	30	80			83	62	42	107	121			

Equivalent Hardness Conversion Table

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118	43	67			98	95	28		79				83	62	41	106	119			
116	42	66			97	95	27		78				82	61	40	104	117			
115	42	65			96	94	25		78				82	60	39	102	116			
114	42	64			96	94	24		77				82	60	38	101	114			
113	41	63			95	93	22		76				81	59	37	99	112			
112	41	62			95	92	21		75				81	58	36	98	110			
111	40	61			94	92	19		74				81	57	35	96	108			
110	40	60			93	91	18		73				81	57	34	95	107			
108	39	59			93	91	16		72				80	56	32	94	106			
107	39	58			92	90	15		71				80	55	31	92	104			
106	38	57			91	90	13		71				80	55	30	91	102			
105	38	56			91	89	12		70				79	54	29	90	101			
104	38	55			90	88	10		69				79	53	28	89	99			
103	37	54			90	88	9		68				79	53	27	87				
102	37	53			89	87	7		67				78	52	26	86				
101	36	52			88	87	6		66				78	51	25	85				
100	36	51			88	86	4		65				78	51	24	84				
100	35	50			87	86	3		65				77	50	23	83				
99	35	49			87	85			64				77	49	22	82				
98	35	48			86	85			63				77	49	21	81				
97	34	47			85	84			62				76	48	20	80				
96	34	46			85	83			61				76	47	19	79				
95	33	45			84	83			60				76	46	18	79				
95	33	44			84	82			59				75	46	17	78				
94	32	43			83	82			58				75	45	16	77				
93	32	42			82	81			58				75	44	15	76				
92	31	41			82	81			57				74	44	14	75				
91	31	40			81	80			56				74	43	13	74				
90	31	39			80	79			55				74	42	11	74				
90	30	38			80	79			54				73	42	10	73				
89	30	37			79	78			53				73	41	9	72				
88	29	36			79	78	100	52					73	40	8	71				
88	29	35			78	77	100	52					72	40	7	71				
87	28	34			77	77	99	51					72	39	6	70				
87	28	33			77	76	99	50					72	38	5	69				
86	28	32			76	75	99	49					71	38	4	68				
86	27	31			76	75	98	48					71	37	3	68				
85	27	30			75	74	98	47					71	36	2	67				
85	26	29			74	74	98	46					70	36	1	66				
84	26	28			74	73	97	45					70	35		66				
84	25	27			73	73	97	45					70	34		65				
83	25	26			73	72	97	44					69	33		65				
83	24	25			72	71	96	42					69	33		64				
82	24	24			71	71	96	42					69	32		64				
82	24	23			71	70	96	41					68	31		63				
81	23	22			70	70	95	40					68	31		63				
81	23	21			70	69	95	39					68	30		62				
80	22	20			69	69	95	38					68	29		62				
80	22	19			68	68	94	38					67	29		61				
79	21	18			68	67	94	37					67	28		61				
79	21	17			67	67	93	36					67	27		60				
78	21	16			67	66	93	35					66	26		60				

Equivalent Hardness Conversion Table

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78	20	15			66	66		93	34					66	26		59				
77		14			65	65		92	33					66	25		59				
77		13			65	65		92	32					65	24		58				
76		12			64	64		92	32					65	24		58				
76		11			64	64		91	31					65	23		57				
75		10			63	63		91	30					64	22		57				
75		9			62	62		91	29					64	22		56				
74		8			62	62		90	28					64	21		56				
74		7			61	61		90	27					63	20		56				
73		6			61	61		90	26					63	20		55				
73		5			60	60		89	26					63	19		55				
72		4			59	60		89	25					62	18		55				
72		3			59	59		88	24					62	17		54				
71		2			58	58		88	23					62	17		54				
71		1			58	58		88	22					61	16		53				
70		0			57	57		87	21					61	15		53				
DPH HV/10	A	B	C	D	E	F	G	H	K	15N	30N	45N	15T	30T	45T	BHN 500kg	BHN 3000kg		Kpsi	Mpa	
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Hardness Conversion or Equivalents:

Hardness conversion between different methods and scales cannot be made mathematically exact for a wide range of materials. Different loads, different shape of indenters, homogeneity of specimen, cold working properties and elastic properties all complicate the problem. All tables and charts should be considered as giving approximate equivalents, particularly when converting to a method or scale which is not physically possible for the particular test material and thus cannot be verified. An example would be converting HV/10 or HR-15N value on a thin coating to the JIRC equivalent.

LINKS TO:

[Hardness Testing](#)
[Rockwell Hardness Test](#)
[Rockwell Superficial Hardness Test](#)
[Brinell Hardness Test](#)
[Vickers Hardness Test](#)
[Microhardness Test](#)
[Mohs Hardness Test](#)
[Scleroscope and other hardness testing methods](#)

TABLES and CHARTS:

[Hardness Conversion Table \(colour version - may take time to load\)](#)
[Hardness Conversion Table \(non-colour version\)](#)
[Hardness Conversion Chart \(1\)](#)
[Hardness Conversion Chart \(2\)](#)
[Chart of Brinell, Vickers and Ultimate Tensile Strength Equivalents \(1\)](#)
[Chart of Brinell, Vickers and Ultimate Tensile Strength Equivalents \(2\)](#)
[Hardness Conversion Table related to Rockwell C Hardness Scale \(hard materials\) \(colour\)](#)
[Hardness Conversion Table related to Rockwell C Hardness Scale \(hard materials\) \(non-colour\)](#)
[Hardness Conversion Chart related to Rockwell C Hardness Scales \(hard materials\)](#)
[Estimated Hardness Equivalent Chart related to Rockwell C and Vickers \(hard materials\)](#)
[Hardness Conversion Table related to Rockwell B Hardness Scale \(soft metals\) \(colour\)](#)
[Hardness Conversion Table related to Rockwell B Hardness Scale \(soft metals\) \(non-colour\)](#)

Equivalent Hardness Conversion Table

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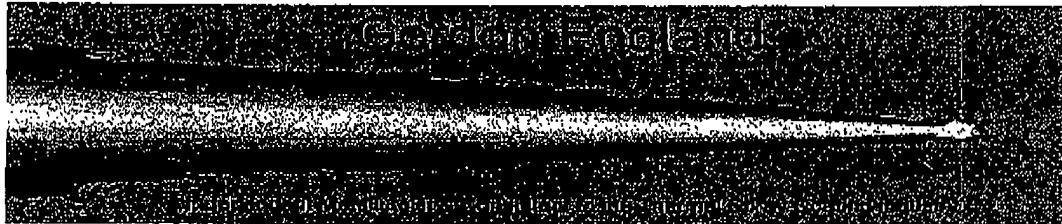
[Hardness Conversion Chart related to Rockwell B Hardness Scale \(soft metals\)](#)[Table of Minimum Test Piece Thickness for Rockwell Hardness Testing using Ball Indenters](#)[Table of Minimum Test Piece Thickness for Rockwell Hardness Testing using Diamond Indenters](#)[HV, MPa and GPa Conversion Calculator](#)[The Viscosity Journal](#)Sponsored by Brookfield
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